THE INSTITUTE OF PHYSICS
47 BELGRAVE SQUARE, LONDON, S.W.1.

BULLETIN

VOL. VI, No. 2 FEBRUARY, 1955

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The Bulletin is not intended for general circulation : your copy should not therefore be passed to a library.

APPOINTMENTS VACANT

The inclusion of particulars of a vacancy must not be taken to imply that the Institute necessarily approves of the terms offered or that might be offered. Candidates should satisfy themselves that these are satisfactory, and they may always refer to the Institute for advice.

Young graduate **physicist,** aged about 24 years, for duties in department controlling quality of raw materials and products at all stages of manufacture of Artificial Graphite for use in Steel, Chemical and other industries.

Applications with full details of qualifications to :—**British Acheson Electrodes Ltd.,** Grange Mill Lane, Wincobank, Sheffield, 9.

Central Research Establishment, **National Coal Board** (at Isleworth, Middlesex) which is concerned with mining problems, invite applications for the superannuable appointment of a **physicist** to lead a group carrying out research on coal ploughing. The work will be concerned initially with a study of the internal stress distribution and breakage pattern induced in a brittle solid containing internal weaknesses by the application of a localized continuous or impulsive force.

Candidates should have a good honours degree in physics or similar professional qualifications, proved research ability and preferably some experience of stress analysis.

Appointment will be as Scientist Grade I (scale £1,150 × £40 to £1,350, thence by range to £1,550 male, plus London Location Allowance of £82 minimum rising to £100 at maximum).

Write giving full particulars (in chronological order) of age, education, qualifications and experience (with dates) to National Coal Board, Establishments (Personnel), Hobart House, Grosvenor Place, London, S.W.1, marking envelope TT/906. Original testimonials should not be forwarded. Closing date February 16, 1955.

Instrument engineer with sound theoretical and practical knowledge of pneumatic and electronic recording and controlling instruments required to develop a department for the installation and maintenance of instruments, in large modern paper mill. Four figure salary and excellent prospects. Apply to the Personnel Officer, **Albert E. Reed & Co. Ltd.,** Aylesford Paper Mills, Larkfield, Nr. Maidstone, Kent.

Physicist or electrical engineer required as **technical manager** of a medium-sized Company engaged in the manufacture of rubber and thermoplastic cables, to be responsible for the technical control of production and development of the Company's products. Applicants should be graduates in physics or electrical engineering or hold equivalent qualifications, and must have wide experience of the electrical cable industry. Applications in writing, stating age, qualifications and experience and salary required to be addressed to :—Personnel Officer, **St. Helens Cable & Rubber Co. Ltd.,** Trading Estate, Slough, Bucks.

Physicist or Mathematician required at **Ministry of Supply Headquarters, London,** to investigate data reduction associated with ballistic instrumentation with a view to improving methods of presentation of results and to introducing methods of analysis applicable to automatic computing machines. Qualifications 1st or 2nd class honours degree in physics or mathematics. Salary within Scientific Officer range : £492 10s. 0d. – £885. Women somewhat less. F.S.S.U. benefits may be available. Application forms from M.L.N.S., Technical and Scientific Register (K), 26 King Street, London, S.W.1, quoting A7/5A. Closing date February, 24 1955.

Physicist required with wide experience of electronic devices and circuit design and who enjoys mathematical analysis. Senior position offers wide scope. Minimum salary £1,000 p.a. Write Managing Director, **Southern Instruments Ltd.,** Frimley Road, Camberley, Surrey.

Department of Scientific and Industrial Research require unestablished scientific officer (physicist) at **Water Pollution Research Laboratory, Stevenage,** for research on physical problems arising in the study of polluted rivers. 1st or 2nd class honours degree in physics with mathematics as subsidiary subject, or equivalent qualification. Inclusive annual remuneration for a 45½-hour week : £482 – £870 (men), £482 – £772 (women). Prospect of establishment for applicants under 28. Favourable housing facilities for married staff. Application forms from M.L.N.S., Technical and Scientific Register (K), 26 King Street, London, S.W.1, quoting A85/54A. Closing date February 24, 1955.

College of Arts and Science, Baghdad, Iraq.

Applications are invited for the post of **Reader** and three posts of **Senior Lecturer** or **Lecturer in physics.** Term of appointment to commence not later than October 1, 1955. Salaries are in the range ID. 1400–2400 (1 ID.=£1) together with a cost-of-living bonus of at least ID 120 and certain other allowances. Passages are paid at beginning and end of contract. Annual summer leave is permitted. Persons appointed are required to carry on research and to teach candidates for B.Sc. degree. Teaching is in English. Climate and conditions are suitable for British families.

For further information apply to the undersigned.

A. A. Duri, Dean.

The United Kingdom Atomic Energy Authority, Foulness, Essex, requires a general experimental physicist in the grade of **principal scientific officer** or **senior scientific officer** for the investigation of detonation phenomena. The field of work comprises classical physics of high pressures and the temperatures as applied to the behaviour of solid high explosives and inert substances in contact with them. Minimum qualifications are first or second class honours degree in physics and several years general physical research experience. The salary ranges are :

Principal Scientific Officer £1,205 – £1,615 (male) per annum, and Senior Scientific Officer £1,040 – £1,205 (male) per annum.

The successful applicant will be required to join the Authority's Principal Superannuation Scheme, which is contributory. Application form from Senior Recruitment Officer, A.W.R.E., Aldermaston, Berks. Quote Ref. 328/WGE/110.

Nuclear Physics Section of a laboratory for long-term research.

Applications are invited for posts as **physicists** for fundamental research in nuclear physics and in the physics of gaseous discharges. Applicants should have a good honours or Ph.D. degree, and preferably be under 28 years of age.

Applicants should send full particulars in writing to the Personnel Officer, **Research Laboratory, Associated Electrical Industries Limited, Aldermaston Court, Aldermaston, Berks.**

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THE INSTITUTE OF PHYSICS

Vol. VI, No. 2 **BULLETIN** February, 1955

NOTICES TO MEMBERS

Conference on "The physics of nuclear reactors"

The Institute is arranging a London Conference on "The physics of nuclear reactors" from July 3–6, 1956, which the President (Sir John Cockcroft) will open with an address on the "Scientific problems in the generation of nuclear power." The primary purpose of the Conference is to keep members of the Institute, particularly those engaged in industry, informed about recent developments in reactor physics and the cognate scientific and technical subjects, and to tell them of the problems awaiting solution. It is likely that more and more physicists will find themselves concerned with these subjects and the Board of the Institute desires to assist members to keep abreast of developments. A limited number of non-members will be able to attend the Conference by invitation. Further details will be announced in the autumn of 1955, and will include the procedure by which non-members may be considered for invitation to attend the Conference.

Restraint Clauses in Contracts of Service

An article in the January issue of the *Journal of the Royal Institute of Chemistry* deals with a recent judgment in the High Court in a case where a Company sought to restrict the field of employment of a chemist previously in its service on the ground of a restrictive clause in a contract of service ; the judgment was by Mr. Justice Dankwerts. His Lordship decided in favour of the firm and held that the restriction was justified in the circumstances of that case. The restriction covered a period of one year from the termination of the employment of the chemist by the firm and a sum equal to one half of the annual salary of the chemist was payable to him in consideration of the withholding of permission to enter the employment of a competitor.

This important case will serve to emphasize the importance that should be attached to clarification of such clauses in any that members are asked to sign. It should also be stressed, as was pointed out in *Notes on Terms of Engagement of Physicists*, "It is believed to be in the interest of both parties that employers should insist only upon such

restrictive clauses as are considered essential for their protection, and that where a clause imposing additional restraint is included in a contract the scope and period of the restraint should be clearly stated. Adequate financial consideration for such additional restraint should be provided in the terms of engagement." Copies of these notes are available from the Institute ; the permanent officers are always willing to advise members on particular clauses in such contracts.

The Institute's 1955 Budget

Each year the Board approves a Budget of income and expenditure based upon recommendations and estimates made by the Finance Committee. For 1955 a cash income of about £50,000 is estimated ; the principal items are £12,350 from members' subscriptions and entrance fees, £27,500 from the sale of publications and £8,000 income from advertisements in the Journals. The main items of expenditure are expected to be £20,850 for the production and distribution of publications, £14,800 salaries, wages and superannuation (about half of this sum is attributable to the production of publications), and £4,000 for rent, rates, heat, cleaning and maintenance of the Institute's House. Items of expenditure totalling £46,900 have been authorized, giving an estimated gross surplus of over £3,000. This surplus will be used for the writing off of expenditure of alterations and furnishings and fittings, for the payment (£985) of the annual premium on the leasehold redemption policy which will provide the Institute with £40,000 when the lease of the House expires and for the increasing of the reserve offsetting the value of books held in stock.

Graduateship Examination 1955

The Graduateship examination will be held from June 20–24, 1955, in London (the Institute's House), Birmingham (College of Technology), Salford (Royal Technical College) and Paisley (Technical College). Over eighty candidates have so far applied to be admitted to the examination. Most of these hold either a Higher National Certificate in Applied Physics or a university degree such as the General degree of the University of London at pass standard. Normally these qualifications will entitle candidates to exemption from all except two papers of the examination. The standard achieved by candidates in these two groups in past examinations has, however, been disappointing and the examiners have taken a stricter view for the 1955 examination. About twenty of the graduate candidates will be required to take a practical examination. Further,

the regulations relating to study at a recognized college have been interpreted rigorously. Candidates who have obtained the General degree after studying at an institution which the Institute does not recognize for the purpose of its membership regulations will not be granted any exemption from the Institute's examination. They will be required to take six written papers and a practical examination.

Transfer to Graduateship

Student members who have now obtained degrees are reminded of the requirement of By-Law 33 which states that :

> " A student shall cease to be a student at the end of the
> in which he becomes eligible for transfer to the grade of Graduate . . . unless the Board upon the receipt of a written application from him allows him to remain a student."

To be eligible for transfer to Graduateship a candidate must (i) have reached the age of 21 years, (ii) have received a general education approved by the Board, (iii) have obtained a degree or diploma recognized by the Board or have passed the Institute's Graduateship Examination, and (iv) be at the time of his application engaged in research, teaching or industrial or other work or advanced study which, in the opinion of the Board, demands sufficient knowledge of physics.

Forms of application for transfer to Graduateship may be obtained from the Deputy Secretary.

Cambridge Summer School in Automatic Computing, 1955

A Summer School in programme design for automatic digital computing machines will be held in the University Mathematical Laboratory at Cambridge during the period September 12–23, 1955. It will be along the same lines as those held previously.

A detailed syllabus and form of application for admission may be obtained from G. F. Hickson, M.A., Secretary of the Board of Estra-mural Studies, Stuart House, Cambridge, to whom the completed application form should be returned not later than June 15, 1955.

" Science in Britain " series

Twenty-three titles in the " Science in Britain " series of monographs published by the British Council are now available at the specially reduced price of 6d. a copy. Among these are Sir Lawrence Braggs " The History of X-Ray Analysis," Professor L. F. Bates

" Sir Alfred Ewing," Mr. T. Martin's " The Royal Institution " and Dr. R. L. Smith-Rose's " James Clerk Maxwell." Order forms may be obtained from Brown Watson Ltd., The Grampians, London, W.6.

Australian Conference on Teaching of Physics

The Victorian Division of the Australian Branch of the Institute, sponsored a very successful conference on the teaching of physics which was held on August 26 and 27 in the Physics Department, University of Melbourne. 250 teachers from State Secondary Schools, Public and Private Schools in Victoria attended. Short lectures on topics of interest to teachers were followed by discussions. The programme included a tour of the Melbourne University Physics Department and a lecture reviewing current advances in physics. A concluding lecture on " Antarctica," given by Mr. P. G. Law, (*Fellow*), Director of the Antarctic Division, Department of External Affairs, was much appreciated. Mr. Law was chairman of the sub-committee which organized the conference.

As an outcome of the discussion two teachers' sub-committees are being convened. One of these sub-committees is to investigate the manufacture and supply of suitable laboratory equipment, as the quality of the equipment commercially available to schools is unsatisfactory. The other sub-committee is to look into the provision of visual teaching aids in physics.

The Institution of Electrical Engineers meeting

An invitation is extended to members of the Institute to attend an Extra Meeting of the Institution of Electrical Engineers. This will be on May 12, 1955, at 5.30 p.m. (tea at 5 p.m.). Dr. W. J. Oosterkamp and Mr. G. M. Ardran will open a discussion on the subject of " Image Intensification in Radiology." An abstract of the openers' remarks will be available in April from the Institution of Electrical Engineers.

PRESENTATION OF GIFT TO THE INSTITUTE

The table and chairs presented by Associated Electrical Industries Ltd.

The Board is glad to acknowledge with thanks a generous gift from the Research Laboratory of Associated Electrical Industries Limited. This comprised a mahogany pedestal table and chairs, a photograph of which is reproduced above. These pieces were formally presented prior to a Committee meeting on December 31. Dr. T. E. Allibone (*Fellow und former Vice-President*), Director of the Research Laboratory of Associated Electrical Industries Limited, Aldermaston, in making the presentation spoke of the valuable work which was done by the Institute. He believed that as much as possible of the subscriptions of members should be devoted to the scientific work of the Institute which it performed through conferences, meetings and its publications. In order that this

could be so, he and his Directors felt that the larger industrial organizations who employ many physicists should help the Institute by gifts of furniture and fittings that would add to the convenience and dignity of its Headquarters and enable it to hold its meetings in comfortable and pleasant surroundings.

Dr. T. E. Allibone (right) formally presenting the gift to Dr. S. Whitehead, Honorary Treasurer of the Institute.

In accepting the gift on behalf of the President and Board, Dr. S. Whitehead (*Honorary Treasurer*) spoke of the great encouragement given by such presents to all those who had the interests of the Institute at heart.

PHYSICAL SOCIETY MEETINGS

Members of the Institute are invited to attend any of the following meetings of the Physical Society's groups :—

Date	*Title*	*Lecturer*	*Place*
March 10 4.30 p.m. Low Temperature Group	Some experimental problems encountered in the Fractionation of Liquid Air	Dr. G. G. Haselden	London : Science Museum
March 17 Optical Group	Light Waves as Standards of Length	Dr. H. Barrell	London :
	The Application of Moire Fringes to Length Measurement	Mr. J. Guild	
March 21 5.0 p.m. Acoustics Group	Transducers	Mr. G. Bradfield	London : Royal Society of Arts.
March 22 Physical Society	Guthrie Lecture	Prof. E. C. Stoner	London :

NEWS OF MEMBERS

Fellows

SIR JOHN COCKCROFT has been awarded the Faraday Medal of the Institution of Electrical Engineers.

J. DE GRAAFF-HUNTER has been elected President of the International Association of Geodesy for the period ending with the close of the next Assembly at Buenos Aires in 1957.

T. L. IBBS has been appointed to a specially created Chair of Physics in the University of Birmingham ; he will assume responsibility for the administration of the physics department.

A. J. LANGLEY is now Executive Assistant to the Managing Director of Computing Devices of Canada Limited in Ottawa. He would be glad to hear from any Fellows or Associates who may be going to Canada.

H. LIPSON has been appointed to the newly created Chair of Applied Physics in the University of Manchester. Dr. Lipson has been Head of the Physics Department of the College of Technology, Manchester, since 1945.

A. H. SULLY will take up an appointment as Associate Director of Research with British Steel Castings Research Association in March.

A. S. M. SYMONS is now Principal of the County Technical College, Guildford.

Associates

J. GRINDLEY is now employed by The Plessey Co. Ltd. at Towcester.

N. H. LANGTON has recently taken up the position of Lecturer in physics at the National College of Rubber Technology, Northern Polytechnic, London.

E. LISTER is now Manager of engineering research in the department of research and technical development of Stewarts and Lloyds Ltd.

L. MANDEL has taken up an appointment as Research Fellow in the physics department of the Imperial College of Science and Technology.

G. MUNDAY is now with Nuclear Engineering Ltd., London.

F. STERN has taken up an appointment with the British Jute Trade Research Association as a physicist.

Graduates

W. ARROWSMITH will shortly take up an appointment with the Northern Electric Co. Ltd., Canada.

I. BUTTERWORTH is now with the Nuclear Physics Division at the Atomic Energy Research Establishment at Harwell.

J. A. GILDEA is employed by The General Electric Company Stanmore Laboratories.

D. I. JAMES is now physics master at Llanidloes County Secondary School.

R. WILCOX is employed as a research physicist by the Dunlop Rubber Company.

THE REGISTER

ELECTIONS TO MEMBERSHIP

An asterisk (*) indicates transfer from another grade

Fellows

*Hurley, Frederick I., B.A., B.Sc., Research Manager, United Kingdom Atomic Energy Authority, Industrial Group, Capenhurst.

*Kennedy, Alfred J., B.Sc., Ph.D., Principal Scientific Officer, Head of the Metal Physics Section, The British Iron and Steel Research Association, London.

McGee, James D., M.Sc., Ph.D., Professor of Instrument Technology, Imperial College of Science and Technology, London.

*Pillow, Marjorie E., B.Sc., Head of Physics Department, Northern Polytechnic, London.

*Radcliffe, Alec, B.Sc., Principal Scientific Officer, National Gas Turbine Establishment, Ministry of Supply.

von Bertele, Hans Carl, Dip. in El. Eng., Consultant.

Associates

*Baird, Martin E., B.Sc., Research Physicist, British Nylon Spinners Ltd., Pontypool.

*Bassett, George A., M.Sc., Scientific Staff, Research Laboratories, The General Electric Co. Ltd., Wembley.

Baxter, Sydney S., B.Sc., Assistant Lecturer, Royal Technical College, Salford.

Blevin, William R., M.Sc., Research Officer, Division of Physics, Commonwealth Scientific Industrial Research Organization, University Grounds, Sydney.

*Botterill, John S. M., B.Sc., Ph.D., Scientific Officer, United Kingdom Atomic Energy Authority, Industrial Group, Salwick.

Briggs, David S., M.A., B.Sc., Assistant Group Manager, Technical Records, United Kingdom Atomic Energy Authority, Capenhurst.

*Brown, Eric S., B.Sc., Physicist III, United Kingdom Atomic Energy Authority, Sellafield.

*Caplehorn, Wallace F., M.Sc., Officer in Charge, Australian Army Operational Research Group.

Eaton, Geoffrey K., B.Sc., Ph.D., Research Physicist, Mullard Radio Valve Co. Ltd., Redhill.

*Fane, Raymond W., M.Sc., Physicist, Research Laboratories, Marconi's Wireless Telegraph Co. Ltd., Chelmsford.

Fowlie, George G., B.Sc., Technical Officer, Imperial Chemical Industries Ltd., Nobel Division, Stevenston.

*Gill, Robert, B.Sc., Senior Scientific Officer, Radar Research Establishment, Gt. Malvern.

Greene, David, M.Sc., Ph.D., Physicist, Medical Research Council, Betatron Research Group, Christie Hospital, Manchester.

*Griffith, Stephen, B.Sc., Senior Physics Master, Pembroke Dock County School.

Hardy, Walter D., B.Sc., Director of Studies, Royal Australian Air Force College, Point Cook.

*Head, Alan K., B.A., B.Sc., Ph.D., Scientific Officer, Aeronautical Research Laboratories, Dept. of Supply, Melbourne.

*Hills, John F., B.Sc., Physicist, Shell Refining and Marketing Co. Ltd., Ellesmere Port.

Hodgson, Kenneth R., M.Sc., Lecturer in Physics, Technical College, Stockton-on-Tees.

*Hudson, Stanley B., M.Sc., Research Officer, Commonwealth Scientific Industrial Research Organization, Melbourne, Australia.

*Jenkins, Ieuan H., B.Sc., Section Leader, Electric and Musical Instruments Engineering Development Ltd., Hayes.

Klinger, Yehuda, M.Sc., A.R.C.S., D.I.C., Research Assistant, Imperial College of Science and Technology, London.

Laby, Jean E., M.Sc., Senior Demonstrator, Physics Department, University of Melbourne.

Le Croissette, Dennis H., M.Sc., Lecturer in Physics, University of Southampton.

*Margerson, Stephen N. A., M.Sc., Experimental Officer, Safety in Mines Research Establishment, Buxton.

Norman, Ronald H., M.Sc., Senior Scientific Officer, Research Association of British Rubber Manufacturers, Shrewsbury.

Parish, Peter G., B.Sc., Senior Scientific Officer, United Kingdom Atomic Energy Authority, Shoeburyness.

Parkinson, Wilfred D., B.Sc., Ph.D., Senior Geophysicist, Bureau of Mineral Resources, Melbourne.

*Peres, Nicholas J. C., M.Sc., Research Officer, Division of Metrology, National Standards Laboratory, Commonwealth Scientific Industrial Research Organization, Sydney.

*Pulford, Arthur G. M., M.Sc., Design and Development Engineer, F. R. Pulford and Son Pty. Ltd., Sydney.

*Rooke, Joan Marion, B.Sc., Junior Physicist, Metropolitan Vickers Electrical Company Ltd., Manchester.

*Sarjeant, Harry B., B.Sc., M.A., Senior Lecturer, Secondary Teachers' College, University of Melbourne.

Sharp, Gerald R., M.Sc., Lecturer in Physics, Norwood Technical College.

*Smallwood, Stanley E. F., B.Sc., Experimental Staff, Research Laboratories, The General Electric Co. Ltd., Wembley.

*Smith, Francis, M.Sc., Technical Officer, Ferodo Ltd., Chapel-en-le-Frith.

Smith, John A. S., B.A., D.Phil., Lecturer in Inorganic and Structural Chemistry, University of Leeds.

*Swindells, A., M.A., Research Engineer, British Nylon Spinners Ltd., Pontypool.

Timmel, Karl E., Dr.Phil., Engineering Physicist, Scientific Services Division, Snowy Mountains Hydro-Electric Authority, New South Wales.

Vollprecht, R., B.Sc., Senior Meteorologist, Meteorological Branch, Department of Interior, Commonwealth of Australia.

Warrell, Bowring Robert H., M.A., Senior Scientific Officer, Atomic Energy Research Establishment, Harwell.

Webb, Charles G., B.Sc., Head of Department of Physics, University of Malaya.

Weinberg, F. J., B.Sc., D.I.C., Ph.D., Assistant Lecturer, Imperial College of Science and Technology, London.

*Weston, Ronald E., B.Sc., Refinery Technologist, Shell Refining and Marketing Co. Ltd., Ellesmere Port.

*Whitlock, Walter S., B.Sc., Scientific Officer, Royal Naval Scientific Service.

Graduates

Barr, Leslie W., B.Sc., Research Student, Department of Natural Philosophy, University of Edinburgh.

Beadle, Nicholas M., B.A., Development Engineer, X-ray Department, Hilger and Watts Ltd., London.

Brennan, Maxwell H., B.Sc., Research Student, University of Sydney.

Champion, John V., B.Sc., Research Assistant, Sir John Cass College, London.

Clark, Laurence G. S., B.Sc., Scientific Staff, Research Laboratories, The General Electric Co. Ltd., Stanmore, Middlesex.

*Cole, Roy S., B.Sc., Junior Engineer, Electric and Musical Industries Engineering Development Ltd., Feltham.

Cotton, John M., B.Sc., Scientific Staff, The General Electric Co. Ltd., Stanmore Laboratories, Middlesex.

Crawley, John C. W., B.Sc., Research Student, King's College, London.

Daglish, Hugh N., B.Sc., Junior Research Fellow, Post Office Research Station, Dollis Hill.

Davie, William A. J., B.Sc., Research Student, College of Aeronautics, Cranfield, Bletchley.

Davies, Terrence A., B.Sc., Postgraduate Research Student, University College of Swansea.

Davis, Charles D., B.Sc., Assistant Experimental Officer, Armament Research Establishment, Woolwich.

de Tullio, L., B.Sc., Research Physicist, Marconi's Wireless Telegraph Co. Ltd., Chelmsford.

Docherty, Ian S., B.Sc., Research Student, University of Sydney.

Eeles, Wilfred T., B.Sc., M.Sc., Research Student, Viriamu Jones Laboratory, University College, Cardiff.

*Eastlake, Richard P., B.Sc., Research Student for Rockefeller Foundation, Acoustics Department, Imperial College of Science and Technology, London.

Glaister, Raymond M., B.Sc., Research Graduate, University of Bristol.

Haddock, W., M.A., Experimental Staff, The General Electric Company Ltd., Stanmore, Middlesex.

Holt, Peter N., B.Sc., Application Engineer, Fielden Electronics Ltd., Manchester.

Hurst, James N., B.Sc.

Isaac, Philip J., B.Sc., Research Student, University College of Wales.

Jones, Desmond, B.Sc., Engineer, British Telecommunications Research Ltd., Taplow, Buckinghamshire.

Leach, Rodney, B.Sc., Research Student, Department of Physics, University of Birmingham.

Marr, Geoffrey R., B.Sc., Research Assistant, South West Essex Technical College.

May, Douglas, B.Sc., Research Physicist, James A. Jobling and Company Ltd., Wear Glass Works, Sunderland.

McVittie, Judy, B.A., Junior Research Officer, British Cotton Industry Research Association, Manchester.

Mitchell, Ian M., B.Sc., Engineer, De Havilland Propellers Ltd., Hatfield.

*Norris, Ian S., B.Sc., Assistant Engineer, Decca Radar Ltd., Surbiton.

Percival, Elizabeth A., B.Sc., Assistant Mistress, Trinity Hall School, Southport.

Phin, Charles W., B.Sc., Scientific Officer, Royal Naval Scientific Service, Greenock.

Pike, Edward R., B.Sc., Research Assistant, Department of Physics, University College, Cardiff.

Poole, Robert J., B.Sc., Chief Chemist, Shell Co. of Singapore Ltd.

Redmond, Glyn B., B.Sc., Research Physicist, Dunlop Rubber Co. Ltd., Birmingham.

Saltmarsh, Doreen, B.Sc., Physicist, Textile Machine Manufacturers Ltd., Rossendale.

Sarkar, A. B., M.Sc., Inspector, Standard Telephones and Cables Ltd., London.

*Shavick, Lawrence, B.Sc.

Shewring, Donald, B.Sc., Technical Officer, G.P.O. Engineering Department, Radio Experimental and Development Branch.

Sheriff, Norman, B.Sc., Research Aerodynamicist, A. V. Roe and Co. Ltd., Woodford, Cheshire.

*Spiers, Veronica M., B.Sc., Assistant Technical Officer, Metals Division, Imperial Chemical Industries Ltd., Birmingham.

Sreenivas, C. K., B.Sc., D.I.I.Sc., Graduate Apprentice, Electrical Research Association Laboratories, Perivale.

Sunthankar, Yeshwant S., M.Sc., Development Engineer, Automatic Telephone and Electric Co. Ltd., Bridgnorth.

Tarrant, Arthur W. S., B.Sc., Assistant Experimental Officer, National Physical Laboratory, Teddington.

Thomas, Ann M., B.Sc., Research Assistant, British Nylon Spinners Ltd., Pontypool.

Williams, Peter G., B.Sc., Senior Technical Assistant, Mullard Radio Valve Co. Ltd., Redhill.

Young, Ian R., B.Sc., Research Student, University of Aberdeen.

Commonwealth of Australia
Wool Textile Research Laboratories

Appointment, number 464/94 of physicist or engineer.

The Commonwealth Scientific and Industrial Research Organization invites applications for appointment to a position of **Senior Research Officer** or **Research Officer** (physicist or engineer), Geelong, Victoria.

Duties. To carry out developmental work on wool textile machinery.

Qualifications. University honours degree in science or engineering, industrial experience in research and development preferable but not essential.

Salary. Dependent on qualifications and experience commencing salary will be determined within the range of Senior Research Officer, £A1472 – £A1750 p.a. actual, £A30 increments, subject to efficiency review at £A1366 p.a. nominal or Research Officer £A1058 – £A1412 p.a. actual, thirteen increments, subject to efficiency review at £A908 and £A1064 p.a. nominal. Salary includes a cost-of-living adjustment of £A198 p.a.

Fare to Australia (including those of wife and family) will be paid.

The appointment is subject to satisfactory medical examination and the appointee may be granted superannuation privileges.

Application referring to appointment number 464/94 and stating full name, place, dates and year of birth, marital state, nationality, present employment, particulars of qualifications and experience, and war service, if any, accompanied by copies of not more than four testimonials, and the names and addresses of at least two persons willing to act as referees, if required, should reach the undersigned not later than the 19th March, 1955.

W. Ives
Chief Scientific Liaison Officer
Australian Scientific Liaison Office,
Africa House,
Kingsway,
London, W.C.2.

Large British Oil Company has vacancies for **geophysicists** on its exploration staff. Candidates should have an honours degree in physics with subsidiary mathematics and/or geology, but candidates with a general degree will be considered. The work involves delineation of underground rock structure by seismic, gravitational and magnetic techniques and offers considerable scope for men with initiative who are prepared to travel and to work abroad. Normal leave is four months after two years' foreign service.

When conditions permit, facilities are afforded for married men to have their families with them on foreign tours.

Basic salary is commensurate with age and experience, commencing at £820 for young, inexperienced graduates. Appropriate allowances are paid whilst on foreign service. Generous pension scheme.

Applications quoting F.107, should be addressed to Box 1223, c/o 191 Gresham House, E.C.2.

The British Iron and Steel Research Association. Vacancies exist in the South Wales Laboratory for honours graduates in physics, metallurgy and electrical engineering to develop new processes for continuously applying protective coating to steel strip at high speeds. Some post-graduate research or industrial experience is desirable. The laboratories are pleasantly situated in Singleton Park on the Gower coast side of Swansea. Commencing salaries of up to £800 p.a. are offered according to age, qualifications and experience. Post is superannuated under F.S.S.U. Written applications only quoting "Coatings" to Personnel Officer, B.I.S.R.A., 11 Park Lane, London, W.1.

Manchester Municipal College of Technology
(Faculty of Technology in the University of Manchester)
Appointment of Lecturer or Senior Lecturer in the Department of Applied Physics

The Governing Body invites applications for an appointment as Lecturer or Senior Lecturer in the Department of Applied Physics, with similar title and status in the University. The exact status of the successful candidate will be determined by his qualifications, experience and age. Candidates should be graudates in physics who have had extensive research experience of solid state physics and preferably of semi-conductors.

The successful applicant will be expected to devote himself mainly to research and the supervision of research. He will be free from administrative responsibilities but will be required to undertake a certain amount of lecturing. Under the general supervision of the Professor of Physics he will be required to build up a new section in the Physics Department. Hitherto the Department has concentrated most of its efforts in X-ray crystallography, and it is very well equipped for work in this field.

The new section is to be housed in part of the extension of the College which will not be finished until next September; nevertheless it would be convenient if the successful candidate could take up his appointment before then so that he could superintend the equipment of his laboratory.

Salary scale: Lecturer £650 – £1,350, Senior Lecturer £1,400 – £1,750 by annual increments of £50.

The appointment may be made anywhere within these scales depending on the qualifications and experience of the applicant. Superannuation under the F.S.S.U. and family allowances.

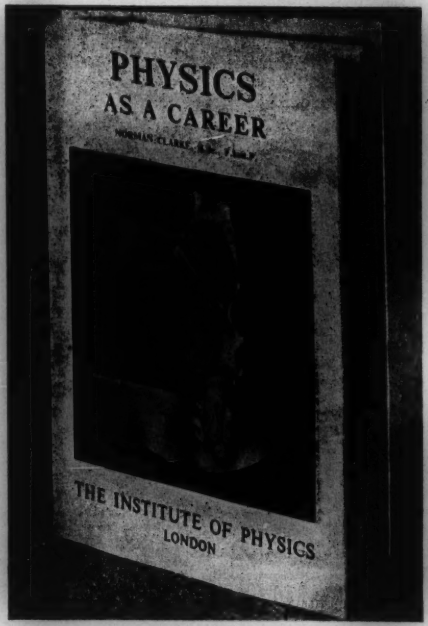
Conditions of appointment and form of application may be obtained from The Registrar, College of Technology, Manchester, 1. The last day for receipt of applications is March 19, 1955.

R. V. Bowden,
Principal of the College.

COURSES

Wolverhampton and Staffordshire Technical College

A course of ten lectures on "**X-ray Radiography and Diffraction**" will be given at the College during the months February – April, 1955. The lectures will be given on Tuesday evenings at 7.0 p.m., commencing on Tuesday, February 1st. The course is intended for graduates or others with similar qualifications, engaged in industrial X-ray work. Enrolments at the College. Course Fee £1 1s. 0d.



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